Review of Previous Meetings

Colorado Rare Plant Symposia
Statewide G1 (2005/2010)
SE Colorado G2 (2006/2012)
2005/2010
Pagosa Springs/Denver
Statewide
G1 species
(excluding T,E&C species)
Aletes latilobus =
*Lomatium latilobum*
Canyonlands biscuitroot

- **Federal status**: BLM sensitive
- **Heritage ranks**: G1G2/S1
- **Global distribution**: Utah (Grand and San Juan counties) and Colorado (Mesa County--Colorado National Monument and Rattlesnake Canyon)
- **Last observed in Colorado**: 2009
- **Colorado occurrences**: 5
- **Colorado individuals**: >5,000
- **Primary threats**: Habitat disturbance, Park developments, trampling by hikers
- **Land ownership/management**: Colorado National Monument, BLM, possibly on adjacent private
Aletes latilobus
**Aliciella sedifolia**
* = *Gilia sedifolia*

**Stonecrop gilia**

- **Federal status:** BLM & USFS
- **Sensitive**
- **Heritage ranks:** G1/S1
- **Global distribution:** Colorado endemic, San Juan Mountains, Hinsdale County
- **Last observed:** 2007
- **Occurrences:** 2
- **Individuals:** 1,100
- **Primary threats:** non-motorized recreation
- **Land ownership/management:** Gunnison and Rio Grande National Forest
Aliciella sedifolia
**Astragalus deterior**
Cliff Palace milkvetch

- **Federal status:** None
- **Heritage ranks:** G1G2/S1S2
- **Global distribution:** Colorado endemic (Montezuma County)
- **Last observed in Colorado:** 2012
- **Colorado occurrences:** 11 (6 historical)
- **Colorado individuals:** ~5000
- **Primary threats:** Non-motorized recreation, exotics
- **Land ownership/management:** BLM, Mesa Verde NP, tribal (Southern Ute and Ute Mountain Ute), and private lands
Astragalus deterior
Astragalus lonchocarpus var. hamiltonii = A. hamiltonii
Hamilton’s milkvetch

- Federal status: none
- Heritage ranks: G4T1/SNA
- Global distribution: Uintah County, Utah
- Last observed in Colorado: 1991
- Colorado occurrences: 0
- Colorado individuals:
- Primary threats: unknown, area heavily grazed in past, OHV and oil & gas development for UT occurrences.
- Land ownership/management: Dinosaur NM in UT; National Wildlife Refuge, Ute, BLM, State, and private in UT

As a result of 2011 surveys the occurrence in CO was determined to be A. lonchocarpus
Astragalus lonchocarpus var. hamiltonii
**Boechera glareosa**
snowbasin rockcress

- **Federal status:** none
- **Heritage ranks:** G1/S1
- **Global distribution:** Utah and Colorado (Moffat county)
- **Last observed in Colorado:** 2002
- **Colorado occurrences:** 1
- **Colorado individuals:** unknown
- **Primary threats:** unknown
- **Land ownership/management:** BLM
Boechera glareosa

Fig. 1. *Boechera glareosa*. A. Fruiting plant. B. Flower. C. Seed. (From Dorn 8734 & 9106, RM.)
Botrychium lineare?
Narrowleaf grapefern

- **Federal status:** Removed; USFS Sensitive
- **Heritage ranks:** G2? /S1
- **Global distribution:** New Brunswick, Quebec, Idaho, Montana, Oregon, California, Wyoming, and Colorado
- **Last observed in Colorado:** 2005+
- **Colorado occurrences:** 5 or more (2 are historical)
- **Colorado individuals:** 60
- **Primary threats:** road maintenance, weeds
- **Land ownership/management:** USFS, private, city of Denver
Botrychium lineare
Botrychium tax. nov.
“furcatum” ?
forkleaved moonwort

- **Federal status**: USFS Sensitive
- **Heritage ranks**: G1G2/S1S2
- **Global distribution**: Colorado (Boulder, Chaffee, Clear Creek, Costilla, Grand, Gunnison, Lake, Park, and Saguache counties), New Mexico (Wheeler Peak, Taos County, pending genetic verification)
- **Last observed in Colorado**: 2009
- **Colorado occurrences**: 18 sites totaling 47 populations or subpopulations
- **Colorado individuals**: ~1200
- **Primary threats**: maintenance and improvements of roads and earthen dams
- **Land ownership/management**: USFS, NPS, Private
Botrychium tax. nov. “furcatum”
Cirsium scapanolepis
Mountain slope thistle

Federal status: none
Heritage ranks: G1G2Q/S1
Global distribution: Colorado endemic
Last observed in Colorado: 1900-1983?
Colorado occurrences: unknown, obscure
Colorado individuals: unknown
Primary threats: weevils, unknown
Land ownership/management: unknown

No longer tracked.
Cirsium scapanolepis
**Corispermum navicula**
Crescent bugseed

- **Federal status:** BLM sensitive
- **Heritage ranks:** G1?/S1
- **Global distribution:** Colorado endemic (Jackson County), possibly Oklahoma?
- **Last observed:** 2006
- **Occurrences:** 2 principal occurrences
- **Individuals:** common locally
- **Primary threats:** off-road vehicle use
- **Land ownership/management:** BLM, Kremmling Field Office
Corispermum navicula
Oreocarya revealii—Cryptantha gypsophila
Gypsum Valley Cat-eye

Conservation Action Plan

- **Federal status**: BLM Sensitive
- **Heritage ranks**: G2/S2
- **Global distribution**: Colorado endemic, Mesa, Montrose & San Miguel Counties
- **Last observed**: 2012
- **Occurrences**: 16 (1 historical)
- **Individuals**: 25,100+
- **Primary threats**: oil and gas development, grazing, ATVs, recreation, roads
- **Land ownership/management**: BLM, Private, State (CDOW)
Descurainia kenheilii
Heil's tansy mustard

- **Federal status**: none
- **Heritage ranks**: G1/S1
- **Global distribution**: Endemic to CO; San Juan County
- **Last observed in Colorado**: 1997
- **Colorado occurrences**: 1
- **Colorado individuals**: unknown
- **Primary threats**: unknown
- **Land ownership/management**: Rio Grande NF; BLM, private
Descurainia kenheilii
Draba malphigiaceae

whitlow-grass

- Federal status: none
- Heritage ranks: G1?/S1?
- Global distribution: Endemic to CO; Hinsdale, La Plata and Montezuma counties
- Last observed in Colorado: 2012
- Colorado occurrences: 4
- Colorado individuals: unknown
- Primary threats: unknown
- Land ownership/management: San Juan NF, private
Draba malphigiaceae
**Draba weberi**  
Weber’s draba  

- **Federal status**: USFS sensitive  
- **Heritage ranks**: G1/S1  
- **Global distribution**: Colorado endemic, Park and Summit counties  
- **Last observed**: 2012  
- **Occurrences**: 4  
- **Individuals**: 20-100  
- **Primary threats**: road and dam construction and maintenance, environmental stochasticity, recreation, mining, noxious weeds, climate change  
- **Land ownership/management**: private (Colo. Spgs. Utilities), USFS
Draba weberi
Erigeron wilkenii
Dieter’s fleabane

- **Federal status:** none
- **Heritage ranks:** G1/S1
- **Global distribution:** endemic to Colorado (Dinosaur National Monument, Moffat County)
- **Last observed:** 2012
- **Occurrences:** 4
- **Individuals:** 1,000-3,000
- **Primary threats:** no specific threats known
- **Land ownership:** Dinosaur NM
Erigeron wilkenii
**Eriogonum brandegeei**
Brandegee’s buckwheat

Conservation Action Plan

- **Federal status**: USFS & BLM
- **Sensitive**
- **Heritage ranks**: G1G2/S1S2
- **Global distribution**: Colorado endemic, Chaffee and Fremont counties
- **Last observed**: 2013
- **Individuals**: 35,000-several million
- **Occurrences**: 8 (3 are historical)
- **Primary threats**: off-road vehicle use and other recreation, residential and commercial development, timbering, mining, highway maintenance, weeds, grazing
- **Land ownership/management**: BLM (some within ACECs), state, private, highway right of way
**Gutierrezia elegans**  
Lone Mesa snakeweed  
*Conservation Action Plan*

- **Federal status**: BLM & USFS
- **Sensitive**
- **Heritage ranks**: G1/S1
- **Global distribution**: Endemic to Colorado; Dolores County
- **Last observed in Colorado**: 2012
- **Colorado occurrences**: 1
- **Colorado individuals**: 30,000
- **Primary threats**: grazing, recreation
- **Land ownership/management**: BLM, San Juan NF, State, private
Gutierrezia elegans
Hackelia gracilenta
Mesa Verde stickseed

- **Federal status**: none
- **Heritage ranks**: G1G2/S1S2
- **Global distribution**: Colorado endemic, Mesa Verde National Park, Montezuma County
- **Last observed**: 2012
- **Occurrences**: 12 (9 are historical)
- **Individuals**: unknown, may be <1000
- **Primary threats**: Unknown, possibly recreation, and/or developments in the Park, such as trails or roads. Fires may have had an impact on this species.
- **Land ownership/management**: Mesa Verde NP
Hackelia gracilenta
**Lygodesmia doloresensis**
Dolores River skeletonplant

- **Federal status:** BLM sensitive in CO
- **Heritage ranks:** G1G2/S1S2
- **Global distribution:** Utah and Colorado (Mesa county)
- **Last observed in Colorado:** 2012
- **Colorado occurrences:** 11 (4 are historical)
- **Colorado individuals:** 3700
- **Primary threats:** deer, rabbit, and cattle grazing, private land development, road maintenance, weeds
- **Land ownership/management:** private, BLM

Conservation Action Plan
Lygodesmia doloresensis
Mimulus gemmiparum
Budding monkeyflower

- **Federal status**: USFS sensitive
- **Heritage ranks**: G1/S1
- **Global distribution**: Colorado endemic, Boulder, Clear Creek, Jefferson, Grand, and Larimer counties
- **Last observed**: 2013
- **Occurrences**: 9 (1 historical)
- **Individuals**: >125,000
- **Primary threats**: recreational activities, trampling, competition from other plants, interference with hydrology
- **Land ownership/management**: Rocky Mountain NP, Pike and Arapaho Roosevelt National Forests, State Parks
Mimulus gemmiparus
**Oreoxis humilis**

Pike’s Peak alpine parsley

- **Federal status:** USFS sensitive
- **Heritage ranks:** G1/S1
- **Global distribution:** Colorado endemic (El Paso and Teller counties)
- **Last observed:** 2010
- **Occurrences:** 3 principal occurrences
- **Individuals:** 4,340 (tens of thousands estimated)
- **Primary threats:** road erosion and construction, structure maintenance, motorized and non-motorized recreation, herbivory, weeds
- **Land ownership/management:** Pike National Forest, private (Colorado Springs Utilities)
Oreoxis humilis
Penstemon gibbensii
Gibbens’ beartongue

- Federal status: BLM sensitive
- Heritage ranks: G1G2/S1
- Global distribution: SC Wyoming, NE Utah, and NW Colorado (Moffat County)
- Last observed in Colorado: 2010
- Occurrences: 2 in CO; 7 total
- Individuals: 5200 in Colorado; 17,000 individuals total
- Primary threats in CO: noxious weeds, grazing, recreational activities, and uranium mining
- Land ownership in CO: BLM, National Wildlife Refuge
Penstemon gibbensii
Physaria pulvinata
Cushion bladderpod

Conservation Action Plan

- **Federal status**: BLM & USFS sensitive
- **Heritage ranks**: G1/S1
- **Global distribution**: Colorado endemic, San Miguel and Dolores counties
- **Last observed**: 2012
- **Occurrences**: 6
- **Individuals**: 22,000
- **Primary threats**: recreation, livestock trampling, weed control, habitat modification for sage grouse management, roads
- **Land ownership/management**: Colorado: Miramonte SWA and Lone Mesa State Park, San Juan NF; BLM, private
Physaria scrotiformis
West Silver bladderpod

- **Federal status**: USFS sensitive
- **Heritage ranks**: G1/S1
- **Global distribution**: Colorado endemic, La Plata County
- **Last observed in Colorado**: 2006
- **Colorado occurrences**: 1
- **Colorado individuals**: unknown
- **Primary threats**: unknown
- **Land ownership/management**: San Juan NF
Physaria scrotiformis
2006/2012

SE Colorado

G2G3 species
Asclepias uncialis ssp. uncialis
Dwarf milkweed

- Federal status: BLM/USFS sensitive
- Heritage ranks: G3G4T2T3/S2
- Global distribution: Arizona, Texas, New Mexico, Wyoming, Oklahoma, Utah, and Eastern Colorado (Las Animas, Weld, Kit Carson, Huerfano, Pueblo, Otero, Prowers, Fremont, and El Paso counties); 3900-7700 ft.
- Last observed in Colorado: 2012
- Colorado occurrences: 38 (13 are historical or extirpated)
- Colorado individuals: ~500
- Primary threats: Population limitation by unknown biological requirements, altered disturbance regime, habitat loss, spread of exotic species, global climate change
- Land ownership/management: BLM, Military, Forest Service, Private, and State lands
Asclepias uncialis ssp. uncialis
Cleome multicaulis = Peritoma multicaulis
Many-stemmed spider-flower

- Federal status: BLM sensitive
- Heritage ranks: G2G3/S2S3
- Global distribution: Mexico, Texas, Arizona, New Mexico, Wyoming and Colorado (Alamosa, Conejos, Costilla, Rio Grande, and Saguache counties); 7500-8200 ft.
- Last observed in Colorado: 2009
- Colorado occurrences: 35 (11 are historical)
- Colorado individuals: ~5,132,000
- Primary threats: draining of wetlands
- Land ownership/management: BLM, National Wildlife Refuge, Private, State, and Wilderness
Cleome multicaulis
Delphinium ramosum var. alpestre
= Delphinium alpestre
Colorado larkspur

- Federal status: none
- Heritage ranks: G4T2/S2
- Global distribution: New Mexico and Colorado (Costilla, Chaffee, Fremont, Huerfano, Las Animas, Mineral, Park, Saguache, and Summit counties); 10,800-14,200 ft.
- Last observed in Colorado: 2005
- Colorado occurrences: 11 (3 are historical)
- Colorado individuals: 100+
- Primary threats: Trampling from recreational activities
- Land ownership/management: Forest Service, Private and Wilderness Areas
Delphinium ramosum var. alpestre
**Delphinium robustum**
Wahatoya Creek larkspur

- **Federal status:** none
- **Heritage ranks:** G2?/S2?
- **Global distribution:** New Mexico and Colorado (Huerfano, El Paso, Las Animas, and Saguache counties); 7000-8500 ft.
- **Last observed in Colorado:** 1969
- **Colorado occurrences:** 4 – all historical
- **Colorado individuals:** unknown
- **Primary threats:** Some species of *Delphinium* are poisonous to cattle, so the genus as a whole is sometimes targeted for poisonous weed control
- **Land ownership/management:** BLM, Forest Service, Private and State
Delphinium robustum
Draba exunguiculata
Clawless draba

- **Federal status:** USFS sensitive
- **Heritage ranks:** G2/S2
- **Global distribution:** endemic to Colorado (Boulder, Chaffee, Clear Creek, El Paso, Gilpin, Grand, Lake, Park and Summit counties); 10,800-14,100 ft.
- **Last observed in Colorado:** 2012
- **Colorado occurrences:** 18 (8 are historical)
- **Colorado individuals:** ~250
- **Primary threats:** Trampling from hikers and mountain goats, over-collection for gardens, acid rain, air pollution, and global warming
- **Land ownership/management:** BLM, Forest Service, Private, State and Wilderness Areas
Draba exunguiculata
Draba grayana
Gray’s Peak whitlow-grass

- **Federal status:** USFS sensitive
- **Heritage ranks:** G2/S2
- **Global distribution:** endemic to Colorado (Chaffee, Clear Creek, Grand, Huerfano, Larimer, Park, Pitkin, Saguache, and Summit counties)
- **Last observed in Colorado:** 2006
- **Colorado occurrences:** 27 (9 are historical)
- **Colorado individuals:** ~200
- **Primary threats:** Trampling from hikers and mountain goats, over-collection for gardens and global warming
- **Land ownership/management:** Forest Service, National Parks and Monuments, Private and Wilderness Areas
Draba grayana
Draba smithii
Smith’s whitlow-grass

- Federal status: USFS sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado (Alamosa, Archuleta, Custer, Las Animas, Mineral, and Saguache counties), and NM; 7400-13,400 ft.
- Last observed in Colorado: 2009
- Colorado occurrences: 28 (6 are historical)
- Colorado individuals: ~3200
- Primary threats: Habitat modification from hiking and construction
- Land ownership/management: Forest Service, Private and State
Draba smithii
Herrickia horrida
= Eurybia horrida

Canadian River spiny aster or Horrid herrickia

- Federal status: none
- Heritage ranks: G2?/S1
- Global distribution: New Mexico and Colorado (Las Animas County); 7900-9300 ft.
- Last observed in Colorado: 2010
- Colorado occurrences: 5 (2 historical)
- Colorado individuals: 500+
- Primary threats: unknown
- Land ownership/management: Private, State
Herrickia horrida
**Nuttallia chrysantha**  
= **Mentzelia chrysantha**  
Golden blazing star

**Conservation Action Plan**

- **Federal status**: BLM sensitive
- **Heritage ranks**: G2/S2
- **Global distribution**: endemic to Colorado (Fremont, El Paso, and Pueblo counties); 4700-6800 ft.
- **Last observed in Colorado**: 2010
- **Colorado occurrences**: 26 (5 are historical)
- **Colorado individuals**: ~4100
- **Primary threats**: Grazing, quarry activities, and subdivision and road construction
- **Land ownership/management**: BLM, Military, Private and State
**Nuttallia densa**

= **Mentzelia densa**

Arkansas Canyon stickleaf

- **Federal status:** BLM sensitive
- **Heritage ranks:** G2/S2
- **Global distribution:** endemic to Colorado (Fremont County); 5400-7700 ft.
- **Last observed in Colorado:** 2009
- **Colorado occurrences:** 16 (2 are historical)
- **Colorado individuals:** ~13,500
- **Primary threats:** Recreational development and road construction
- **Land ownership/management:** BLM, Forest Service, Private and State
Nuttallia densa
Oenothera harringtonii
Arkansas Valley evening primrose

- **Federal status:** none
- **Heritage ranks:** G3/S3
- **Global distribution:** endemic to Colorado (El Paso, Fremont, Huerfano, Las Animas, Otero, and Pueblo counties); 4100-6400 ft.
- **Last observed in Colorado:** 2010
- **Colorado occurrences:** 62 (8 are historical)
- **Colorado individuals:** 12,000+
- **Primary threats:** Habitat loss due to urbanization, road development projects, and resource extraction activities, especially quarrying and surface mining
- **Land ownership/management:** BLM, Military, Forest Service, Private and State
Oenothera harringtonii
Oonopsis foliosa var. monocephala
Rayless goldenweed

- **Federal status**: none
- **Heritage ranks**: G3G4T2/S2
- **Global distribution**: endemic to Colorado (Las Animas, Pueblo, and Fremont counties); 4300-7900 ft.
- **Last observed in Colorado**: 2009
- **Colorado occurrences**: 16 (4 are historical)
- **Colorado individuals**: 400,000+
- **Primary threats**: Maintenance on current roads or further developments may disturb or destroy individuals
- **Land ownership/management**: BLM, Military, Private and State
Oonopsis foliosa var. monocephala
Oonopsis “puebloensis”  
= Oonopsis sp. 1  
Pueblo goldenweed

Conservation Action Plan

- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (El Paso, Fremont and Pueblo counties); 4800-6100 ft.
- Last observed in Colorado: 2009
- Colorado occurrences: 28
- Colorado individuals: ~11,000 or more
- Primary threats: Shale extraction by cement plants
- Land ownership/management: Private, State and Military
**Oxybaphus rotundifolius**  
= **Mirabilis rotundifolia**  
Round-leaf four-o’clock

- **Federal status**: none  
- **Heritage ranks**: G2/S2  
- **Global distribution**: endemic to Colorado (Fremont, Las Animas, El Paso and Pueblo counties); 4900-5900 ft.  
- **Last observed in Colorado**: 2009  
- **Colorado occurrences**: 38 (2 are historical)  
- **Colorado individuals**: ~6200  
- **Primary threats**: Highly threatened by residential and recreational development  
- **Land ownership/management**: BLM, Military, Private and State
Penstemon degeneri
Degener beardtongue

- **Federal status:** USFS & BLM sensitive
- **Heritage ranks:** G2/S2
- **Global distribution:** endemic to Colorado (Chaffee, Custer and Fremont counties); 6000-9400 ft.
- **Last observed in Colorado:** 2010
- **Colorado occurrences:** 16 (2 historical)
- **Colorado individuals:** ~1500
- **Primary threats:** Motorized and non-motorized recreation, non-native plant invasion, grazing and trampling, extensive herbivory, succession, and global environmental changes
- **Land ownership/management:** BLM, Forest Service, Private and State
Penstemon degeneri
**Physaria calcicola**

= *Lesquerella calcicola*

Rocky Mountain bladderpod

- **Federal status**: none
- **Heritage ranks**: G3/S3
- **Global distribution**: New Mexico and Colorado (Conejos, El Paso, Fremont, Huerfano, Las Animas, and Pueblo counties); 4800-9800 ft.
- **Last observed in Colorado**: 2011
- **Colorado occurrences**: 38 (8 are historical)
- **Colorado individuals**: 24,000
- **Primary threats**: This species occurs in areas that are experiencing rapid development pressures
- **Land ownership/management**: BLM, Military, Private, and State
Physaria calcicola
Ptilagrostis porteri
Porter feathergrass

- Federal status: USFS sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado (El Paso, Lake, Park and Summit counties); northern NM; 9000-12,500 ft.
- Last observed in Colorado: 2011
- Colorado occurrences: 26 (5 are historical)
- Colorado individuals: ~408,000
- Primary threats: Alterations to the water table resulting from increased diversion and pumping for the metropolitan front range
- Land ownership/management: BLM, Forest Service, and Private
Ptilagrostis porteri
**Telesonix jamesii**
James’ telesonix

- **Federal status**: none
- **Heritage ranks**: G2/S2
- **Global distribution**: New Mexico and Colorado (El Paso, Jefferson, Larimer, Park, and Teller counties); 6700-13,700 ft.
- **Last observed in Colorado**: 2012
- **Colorado occurrences**: 28 (5 are historical)
- **Colorado individuals**: ~20,000
- **Primary threats**: Motorized and non-motorized recreation, trail or road construction and maintenance, invasive species introduction, and horticultural collection
- **Land ownership/management**: BLM, Military, Forest Service, Private and State